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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,232	08/30/2001	James M. Cisar	72255/05858	9345
23380	7590	11/22/2005	EXAMINER	
TUCKER, ELLIS & WEST LLP 1150 HUNTINGTON BUILDING 925 EUCLID AVENUE CLEVELAND, OH 44115-1475			PARK, JUNG H	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 11/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/943,232	Applicant(s) CISAR ET AL.	
	Examiner Jung Park	Art Unit 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-8, and 11-18 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3, 6-8 and 11-12 is/are allowed.
- 6) ☒ Claim(s) 13-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed on 8/3/2005. Claims 1-2, 6-8 have been amended, claims 4-5 and 9-10 have been cancelled, and claims 11-18 are new. Claims 1-3, 6-8, and 11-18 are pending in the instant application.

Claim Objections

2. Claim 16 is objected to because of the following informalities:

In claim 16, line 1, "the plurality of carriers" is repeated twice.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 14 and 18 recite the limitation "the group" in lines 1 & 2 of claim 14 and lines 2 & 3 of claim 18. There are insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

6. Claims 13-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Teo et al. (U.S., 2002/0,086,708, "Teo").

Regarding claim 13, Teo discloses, "an access point (*50 fig.5*) for operating on a plurality of frequencies (*fig.4A and p.5, par.50*), wherein at least one of the plurality of frequencies is a selected frequency (*p.5, par.50 pilot and signaling channels*) and the remaining of the plurality of frequencies are unselected frequencies (*p.5, par.50 data channels*), comprising:

- an adaptive antenna array (*116a-d fig.6c and p.7, par.63*); a first transmit circuitry and first receive circuitry (*114a-d fig.6c*) for communicating with clients (*54 & 56 fig.5*) associated with the access point, the first transmit and first receive circuitry couple to the adaptive antenna and using the unselected frequencies;
- an omni-directional antenna (*99 fig.6c and p.7, par.63*); and
a second transmit circuitry and second receive circuitry (*98 fig.6c*) for communicating with clients, the second transmit circuitry and second receive circuitry coupled to the omni-directional antenna and using the selected frequency.

Regarding claim 14, the examiner assumes that the applicant sets a transmit circuitry and a receive circuitry as one group since "the group" in lines 1 and 2 is insufficient antecedent basis for this limitation in the claim. Teo does not teach if the first group operates concurrently with the second group. However, this feature is deemed to be inherent to the orthogonal frequency division multiplexing system disclosed by Teo as shown in sample OFDM signal (*fig.4A*) with data traffic channels and signal channels. In OFDM, the data for transmission is, via a serial to parallel converter, converted into several parallel streams and each stream used to modulate a separate subcarrier.

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Therefore, the first group of unselected frequencies is operate concurrently with the second group of selected frequency since the sub-carrier frequencies $f_1 \dots f_n$ are transmitted at the same time.

Regarding claim 15, Teo discloses, "the adaptive antenna array forms at least one directional antenna (directional antenna 116a-d fig. 6c; p.7, par.63)."

Regarding claim 16, Teo discloses, "the plurality of carriers comprises OFDM frequencies (fig.4A and p.3, par.23)."

Regarding claim 17, Teo discloses, "the selected frequency is used for associating new clients (p.7, par.63 pilot signal) and the unselected frequencies are used for other data transmissions (p.7, par.63 data traffic)."

Regarding claim 18, it is claim corresponding to claims 13-17 and is therefore rejected for the similar reasons set forth in the rejection of claim 13-17.

Allowable Subject Matter

7. Claims 1-3, 6-8, and 11-12 allowable.

Response to Arguments

8. Applicant's arguments with respect to claims 1, 6, and 13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung Park whose telephone number is 571-272-8565. The examiner can normally be reached on Mon-Fri during 7:15-4:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JP

Jung Park
Art Unit 2661
Patent Examiner
11/9/2005



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SUPERVISORY PATENT EXAMINER
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